from the camera **216** detects the movement of the user's eyes **218** and adjusts the angles of the louvers of the blocking assembly **214** to keep the user's eyes within the field of view of the emitted light.

[0056] In some implementations, images from the camera **216** that are used to determine the location of the user's head can also use facial recognition to ensure that the detected user is an authorized user. If more than one user is viewing the screen, facial recognition can determine which, if any, of the users is an authorized user using a database of authorized users, and can adjust the field of view of the emitted light so that only the eyes of the authorized user are within the field of view. If no authorized user is detected, the screen may be turned off so that it emits no light.

[0057] In some implementations the louvers located at the outside edges of the display can be tilted in a bit more than louvers crossing the center of the display, resulting in the field of view from the edges of the screen being angled towards the center of the screen, as shown by the fields of view illustrated by the beams **203***a*, **203***b*. This advantageously narrows the field of view for a user whose face is close to the display while reducing the ability of an eavesdropped to see the information on the display. This can be accomplished with louvers **204**, **205** that all move in unison, or that are independently controlled. With independently controlled louvers **204**, **205**, the amount that the field of view is adjusted can be modified to compensate for the distance to the user's eyes **218**.

[0058] FIG. **3** shows a view of a user **302** viewing a combination display device/blocking assembly **301**. An eavesdropper **304** is behind the user **302** looking over the shoulder of the user **302** attempting to view the display screen of the combination display device/blocking assembly **301**. However, the eavesdropper **304** cannot see light from the display but can only see a dark screen because the eavesdropper is not in the field of view **303** of the light emitted by the display as established by the louvers of the blocking assembly. In contrast, the user **302** sees the images on the screen of the device **301** normally, as his eyes are within the field of view **303** of the light emitted by the display.

[0059] FIG. **4** illustrates an embodiment substantially identical to that of FIG. **2** with the following exception. Each louver **400** in FIG. **4** includes an upper panel **402** and a lower panel **404** parallel to the upper panel **402**. The panels **402**, **404** may move in concert with each other or independently of each other. In an example, the one panel **402** can slide longitudinally or transversely relative to the other panel **404** to control the width of the louver **400**. This allows the louvers to be lengthened and/or widened to vary the field of view of the emitted light.

[0060] FIG. **5** illustrates the louvers **104**, **105** tilted at angles displaced from perpendicular to the display screen **103** so that the field of view of the light that is emitted is not perpendicular to the display screen **103**.

[0061] Turning now to FIG. **6**, a blocking assembly **600** may include louvers **602** that bound each of the plural (e.g., three or four or other number) edges of each display pixel region **604** of a display **606** (only four-pixel regions **604** shown). Each pixel region **604** may include plural pixels or one and only one single pixel or only a fraction of a light emitting element for a single pixel. The louvers **602** may be built into the display **606** and the louvers **602** may be independently movable from each other.

[0062] In some implementations, the louvers between the light emitting elements on some rows are tilted such that only one of the user's eyes is within the field of view of the emitted light, and the louvers between the light emitting elements on other rows are tilted such that only the other of the user's eyes is within the field of view of the emitted light. Such a configuration can be used to display an image in 3D to a user without the need for the user to wear glasses to see the image in 3D by presenting demanded left eye images on, for example, even rows and demanded right eye images on odd rows. Such a configuration can also be used to display an image to more than one user such that no other people viewing the screen around them will see any light emitted by the screen.

[0063] In some implementations, the pixels in the regions **604** can be moved up and down in relationship to the louvers **602**, **603**. When moved forward, less of the louvers are in front of the pixels, and the field of view of the emitted light is wider. Movement of the pixels allows the width of the field of view to be adjusted, which can be used to compensate for different distances between the user and the screen, which in turn can ensure that both of the user's eyes are within the field of view. The field of view, however, does not extend beyond the edges of the user's head to allow light from the display to be visible to someone behind the user. This can also be used to allow the privacy screen to be turned off by moving the pixels above the louvers until no part of the louvers **602** are in front of the light emitting elements. In some implementations, the pixels may move up and down but the louvers **602** do not move.

[0064] FIG. **7** illustrates further. Commencing at block **700**, the CE device processor accesses images from the camera to execute head and/or eye tracking of the user. The user tracked may be the closest user as indicated by having a largest user image or it may be a user recognized as being authorized. Other heuristics for determining which user to track may apply. Head/eye tracking can lock in on a particular user, such as the user most centered with the display, and that user becomes the target user that the privacy screen limits the field of view to only be seen by that user. As the tracked user moves, the tracking logic follows the user and continues to differentiate the user from other users that may be present.

[0065] Moving to decision diamond **702**, it may be determined using, e.g., face recognition on the camera images whether the user being tracked at block **700** is an authorized user. If not, the logic may end at state **704** by deenergizing the device display screen.

[0066] On the other hand, if the user is an authorized user the logic may move to block **706** to actuate the louvers of any of the blocking assemblies herein to direct the field of view (FOV) of light propagating away from the device display screen at the user, e.g., at the center of the user's head as recognized from block **700**.

[0067] If desired, the logic may also identify, at decision diamond **708**, whether another person in addition to the user appears in the camera images. If so, an audible or visual or tactile alarm may be actuated at block **710** to alert the user that a potential eavesdropper is nearby. The logic in decision diamond **708** may be set so that it only activates the alarm if it determines that the detected another person is within the field of view of the light emitted by the display. In some cases, the alarm may deenergize the screen in addition to alerting the user.